

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 12-49 are pending in the application, with claims 12, 18, and 25 being the independent claims. Claims 12, 18-30, and 40 are sought to be amended. Applicants reserve the right to prosecute similar or broader claims, with respect to the amended claims, in the future. New claims 45-49 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

With respect to this Application, Applicants hereby rescind any disclaimer of claim scope made in the parent application or any predecessor or related application. The Examiner is advised that any previous disclaimer of claim scope, if any, and the references that it was made to allegedly avoid, may need to be revisited. Nor should any previous disclaimer of claim scope, if any, in this Application be read back into any predecessor or related application.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 12, 15, 16, 18-20, 25-27, and 31-44

Claims 12, 15, 16, 18-20, 25-27, and 31-44 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over United States Patent Publication No. 2003/0120791 to Weber et al. (herein "Weber") in view of United States Patent

Publication No. 2002/0163924 to Kim et al. (herein "Kim"). Applicants respectfully traverse the rejection and provide the following arguments to support patentability.

The United States Supreme Court, in KSR International vs. Teleflex, Inc., 550 U.S. 398 (2007), ruled on the requirements for obviousness analysis under 35 U.S.C. 103(a). The M.P.E.P. provides guidelines for supporting a prima facie obviousness rejection based on combining references. According to the M.P.E.P.,

[t]o reject a claim based on this rationale, Office personnel must resolve the Graham factual inquiries. Then, Office personnel must articulate the following:

(1) ***a finding that the prior art included each element claimed, although not necessarily in a single prior art reference,*** with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference.

M.P.E.P. §2143.A (emphasis added).

The Office Action dated December 24, 2008 (herein "Office Action") alleges Weber teaches or suggests the feature of "*a bus coupled to said plurality of ports on a common substrate, wherein said bus is configured to couple at least one of said first parallel port to at least one of a second parallel port and said first serial port, and said first serial port to at least one of a second serial port and said first parallel port*". See, Office Action, Page 3. However, as to be discussed below, Weber does not teach or suggest at least this aforementioned feature of claim 12. Kim does not provide the missing teachings or suggestions with respect to claim 12 nor does the Office Action allege that Kim provides the missing teachings or suggestions with respect to claim 12 to render claim 12 obvious, therefore the combination of Weber and Kim does not render claim 12 obvious.

Weber discloses a "system and method for implementing [a single-thread, multi-speed (STMS)-multi-thread, single-speed (MTSS)-dual-mode] interconnect protocol method with shared resources on a single die." *See*, Weber, para. [0003]. As shown in FIG. 4 of Weber, "a deserializer portion of serializer/deserializer circuits 410-413 may convert higher-speed serial data to lower-speed parallel data" in a reception function. Weber, para. [0023]. The lower-speed parallel data "is decoded by decoders 420-423 and delivered to buffers 430-433." Weber, para. [0023]. Aggregators 440-443 may align the data according to the STMS protocol and/or an alternate aggregator 445 may align data according to the MTSS protocol. *See*, Weber, para. [0023]. Protocol processors 450-453 may process the data according to the STMS protocol and/or an alternate protocol processor 455 may process data according to the MTSS protocol. *See*, Weber, para. [0023].

In a transmission function, protocol processors 450-453 and the alternate protocol processor 455 "may maintain a parallel word that is sent to data presenter 460-463." Weber, para. [0024]. Data presenters 460-463 align the data according to a protocol definition. *See*, Weber, para. [0024]. "After the data has been modified according to the desired protocol definition, the data stream is transferred to encoders 470-473 for encoding." *See*, Weber, para. [0025]. The MTSS protocol "utilizes a serializer portion of all serializer/deserializer 410-413 to implement one transmission function, for which each serializer transmits an entity of data on each thread." Weber, para. [0025]. The STMS protocol utilizes may use one or more of the serializer/deserializer 410-413 to implement one or more transmission functions. *See*, Weber, para. [0025].

However, claim 12 recites at least the feature of "*a bus coupled to said plurality of ports on a common substrate, wherein said bus is configured to couple at least one of said first parallel port to at least one of a second parallel port and said first serial port, and said first serial port to at least one of a second serial port and said first parallel port*". Claim 12 (emphasis added). Weber does not teach or suggest that the serializer/deserializer circuits 410-413 are "interconnected" as alleged in the Office Action. *See*, Office Action, Page 3. More specifically, Weber does not teach or suggest that a first one of the serializer/deserializer circuits 410-413, such as the serializer/deserializer circuit 410 to provide an example, may be coupled to a second one of the serializer/deserializer circuits 410-413, such as the serializer/deserializer circuit 411 to provide an example, as recited by claim 12. Rather, the serializer/deserializer circuits 410-413 of Weber may provide four independent lanes in accordance with the MTSS protocol definition or one to four channels of in accordance with the STMS protocol definition. *See*, Weber, para. [0022].

Further, *assuming arguendo*, that each one of the serializer/deserializer circuits 410-413 includes a serial port and a parallel port, Weber does not teach or suggest that the serial ports of the serializer/deserializer circuits 410-413 may be coupled to each other or that the serial ports of the serializer/deserializer circuits 410-413 may be coupled to the parallel ports of the serializer/deserializer circuits 410-413 as recited by claim 12. Likewise, Weber does not teach or suggest that the parallel ports of the serializer/deserializer circuits 410-413 may be coupled to each other or that the parallel ports of the serializer/deserializer circuits 410-413 may be coupled to the serial ports of the serializer/deserializer circuits 410-413 as recited by claim 12.

In summary, Weber does not teach or suggest the feature of "*a bus coupled to said plurality of ports on a common substrate, wherein said bus is configured to couple at least one of said first parallel port to at least one of a second parallel port and said first serial port, and said first serial port to at least one of a second serial port and said first parallel port*" as recited by claim 12. Kim does not provide the missing teachings or suggestions with respect to claim 12 nor does the Office Action allege that Kim provides the missing teachings or suggestions with respect to claim 12 to render claim 12 obvious, therefore the combination of Weber and Kim does not render claim 12 obvious. Dependent claims 15, 16, and 31-41 are likewise not rendered obvious by the combination of Weber and Kim for the same reasons as claim 12 from which they respectively depend and further in view of their own respective features. Accordingly, Applicant respectfully requests that the rejection of claims 12, 15, 16, and 31-41 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

The combination of Weber and Kim does not teach or suggest each and every feature of claim 18. For example, as discussed above in regards to claim 12, the combination of Weber and Kim does not teach or suggest at least the features of "*sending data to at least one of said first parallel part from at least one of a second parallel port and said first serial port, and said first serial port from at least one of a second serial port and said first parallel port in accordance with said data protocol and said electrical specification*" as recited by claim 18. Dependent claims 19-20 are likewise not rendered obvious by the combination of Weber and Kim for the same reasons as claim 18 from which they respectively depend and further in view of their own respective features.

Accordingly, Applicant respectfully requests that the rejection of claims 18-20 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

The combination of Weber and Kim does not teach or suggest each and every feature of claim 25. For example, as discussed above in regards to claim 12, the combination of Weber and Kim does not teach or suggest at least the features of "*means for coupling at least one of said first parallel port to at least one of a second parallel port and said first serial port and said first serial port to at least one of a second serial port and said first parallel port*" as recited by claim 25. Dependent claims 26-27 and 42-44 are likewise not rendered obvious by the combination of Weber and Kim for the same reasons as claim 25 from which they respectively depend and further in view of their own respective features. Accordingly, Applicant respectfully requests that the rejection of claims 25-27 and 42-44 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claims 17, 21, and 28

Claims 17, 21, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Weber in view of Kim and in further view of United States Patent Publication No. 2003/0172332 to Rearick (herein "Rearick"). Applicants respectfully traverse the rejection and provide the following arguments to support patentability.

As discussed above, the combination of Weber and Kim does not teach or suggest each and every feature of claims 12 and 18. Rearick does not provide the missing teachings or suggestions with respect to claims 12 and 18. Thus, the combination of Weber, Kim, and Rearick does not render obvious claims 12 and 18. Dependent claims 17, 21, and 28 are likewise not rendered obvious by the combination of Weber, Kim, and Rearick for the same reasons as the independent claims from which

they respectively depend and further in view of their own respective features. Accordingly, Applicant respectfully requests that the rejection of claims 17, 21, and 28 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claims 13, 22-24, 29, and 30

Claims 13, 22-24, 29, and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Weber in view of Kim and in further view of United States Patent Publication No. 2003/0172332 to Taniguchi (herein "Taniguchi"). Applicants respectfully traverse the rejection and provide the following arguments to support patentability.

As discussed above, the combination of Weber and Kim does not teach or suggest each and every feature of claims 12, 18, and 25. Taniguchi does not provide the missing teachings or suggestions with respect to claims 12, 18, and 25. Thus, the combination of Weber, Kim, and Taniguchi does not render obvious claims 12, 18, and 25. Dependent claims 13, 22-24, 29, and 30 are likewise not rendered obvious by the combination of Weber, Kim, and Taniguchi for the same reasons as the independent claims from which they respectively depend and further in view of their own respective features. Accordingly, Applicant respectfully requests that the rejection of claims 13, 22-24, 29, and 30 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

New claims

New claims 45-49 have been added. From the discussion above, Applicants have traversed the rejections to independent claims 18. Dependent claims 45-49 are likewise

allowable for the same reasons as the independent claims from which they respectively depend and further in view of their own respective features.

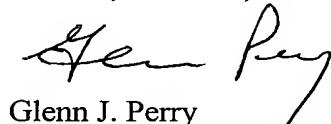
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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